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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,730	12/16/2003	Moo Yeol Park	8734.049 C1	3685

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EXAMINER

CANNING, ANTHONY J

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/735,730

Applicant(s)

PARK ET AL.

Examiner

Anthony J. Canning

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/06/9/06
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Acknowledgement of Amendment

1. The amendment of the instant application was entered on 28 September 2006.

Claim Objections

2. Claim 18 is objected to because of the following informalities: claim 18 depends from claim 17, which has been canceled. The examiner has assumed that claim 18 is now supposed to depend from claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Majima (U.S. 5,724,110).

5. As to claim 1, Majima discloses a method for fabricating a liquid crystal display panel, including: forming a UV sealant (see Fig. 3, item 15; column 6, lines 1-19 and lines 56-60) on either one of first and second substrates (see Fig. 3, item 1'; column 6, lines 56-60; photocurable means cured using light, the examiner interprets this to include light in the ultraviolet wavelength); forming a liquid crystal layer (see Fig. 3, item 15; column 6, lines 1-19 and lines 56-60) between the first and second substrates (see Fig. 3, items 1 and 1'; column 6, lines 56-60);

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attaching the first and second substrates (see Fig. 4; column 6, lines 56-60); hardening the UV sealant other than the UV sealant on the regions where the UV sealant and at least one scribing line are crossed (see Fig. 6, item 14; column 7, lines 1-11; see Fig. 7, items 3 and 5; column 7, lines 23-35; the photomask causes the sealant to migrate to the areas exposed to the UV radiation, therefore the region 5 is not cured) by irradiating a UV ray on the attached substrates (column 7, lines 12-15 metal halide lamps produce light in the ultraviolet wavelength range) with masking regions (see Fig. 6, item 14; column 7, lines 1-11) where the UV sealant and at least one scribing line are crossed (see Fig. 4, item 15; column 6, lines 56-60; the UV sealant is initially on the entire substrate), wherein the UV sealant on the regions where the UV sealant and at least one scribing line are crossed is not entirely cured (see Fig. 7, items 3 and 5; column 6, lines 1-19; the sealant migrates to only areas where light is irradiated upon the substrate; column 7, lines 23-35, there is not curable compound in the scribing regions, 5) and cutting the bonded substrates into a plurality of unit cells (column 7, lines 36-38), wherein forming the liquid crystal layer includes dropping at least one droplet of liquid crystal onto either one of the first and second substrate (see Fig. 3, item 15; column 6, lines 1-19 and 56-60).

6. As to claim 2, Majima discloses the method of claim 1. Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking upper and lower side portions of the crossed regions between the UV sealant and the scribing line (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

7. As to claim 4, Majima discloses the method of claim 1. Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking an active region (see Fig. 6, item 4, item 14; column 7, lines 1-11; the only areas that are irradiated are the

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areas where the sealant is to be formed, which is not the active region) in addition to masking upper and lower side portions of the crossed regions between the UV sealant and the scribing lines (column 5, lines.

8. As to claims 3 and 5, Majima discloses the method of claims 1 and 4. Majima further discloses that the masking regions in the irradiating a UV ray on the attached substrates includes masking left and right side portions of the crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 7, lines 1-11; the mask covers the region of the scribing lines).

9. As to claim 6, Majima discloses the method of claim 1. Majima further discloses that the UV sealant surrounds the plurality of the unit cells (see Fig. 7, item 3; column 7, lines 22-35).

10. As to claim 7, Majima discloses the method of claim 6. Majima further discloses masking an active region inside the main sealant (see Fig. 6, item 16; column 7, lines 1-11).

11. As to claim 8, Majima further discloses the method of claim 6. Majima further discloses that the UV sealant (see Fig. 7, item 3; column 7, lines 22-35) forms at an outside of the main sealant (see Fig. 7, item 4; column 7, lines 22-35).

12. As to claim 9, Majima disclose the method of claim 6, wherein the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

13. As to claim 10, Majima discloses the method of claim 6. Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

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14. As to claim 11, Majima disclose the method of claim 1. Majima further discloses that the UV sealant includes one of monomer and oligomer each having both ends coupled to an acrylic group (column 5, lines 40-44).

15. As to claim 12, Majima discloses the method of claim 1. Majima further discloses that the main UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

16. As to claim 13, Majima discloses the method of claim 1. Majima further discloses heating the UV ray irradiated substrates with masking crossed regions between the UV sealant and the scribing lines (see Fig. 6, item 14; column 6, lines 1-19; the irradiation of the substrate will also heat the substrate), wherein the UV sealant includes one of monomer and oligomer each having one end coupled to an acrylic group and the other end coupled to an epoxy group (column 5, lines 40-61; a cycloaryl group can be an epoxy).

17. As to claim 14, Majima discloses the method of claim 1. Majima further discloses that the scribing line is formed on the bonded substrates (see Fig. 7, items 5 and 6; column 7, lines 23-26).

18. As to claim 15, Majima discloses the method of claim 1. Majima further discloses that the cutting the bonded substrates into a plurality of unit cells is performed by scribing and breaking simultaneously (column 7, lines 36-38, dicing will simultaneously scribe and break the substrates).

19. As to claim 16, Majima discloses the method of claim 1. Majima further discloses including forming at least one column spacer on the first substrate (see Fig. 6, item 17; column 6,

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lines 1-19; the column spacer is formed from the sealing material and is joined to both substrates).

20. As to claim 18, Majima disclose the method of claim 1. Majima further discloses that the UV sealant is formed on the first substrate (see Fig. 5, item 15; column 6, lines 61-67; the UV sealant is formed to be injected between the two substrates), and the at least one droplet of liquid crystal is dropped onto the second substrate (see Fig. 5, item 15; column 6, lines 61-67; the liquid crystal is formed between the two substrates and is therefore formed on the second substrate).

Response to Arguments

21. Applicant's arguments, see Remarks, filed 28 September 2006, with respect to the rejection(s) of claim(s) 1-18 under Nishino et al: (U.S. 6,010,384) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Majima (U.S. 5,724,110).

Contact Information

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Canning whose telephone number is (571)-272-2486. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Canning *AC*
Patent Examiner
Art Unit 2879
8 December 2006

K. Guharay
KARABI GUHARAY
PRIMARY EXAMINER